Environmental Geology

- Special Issue: Environment: Survival and Sustainability (2007)
- Trace elements in soils in porphyry copper deposit, Chile
- Impact of AMD on water quality in critical watershed, New York
Environmental Geology

1. Imprint

Environmental Geology is an international multidisciplinary journal concerned with all aspects of interactions between humans, ecosystems and the earth:

- Water and soil contamination caused by waste disposal and management practices
- Water and soil contamination caused by industrial activities
- Environmental problems associated with transportation
- Geological processes that threaten or affect biosystems and people
- Remediation of man-made or geological hazards
- Environmental problems associated with the recovery of material from the earth
- Environmental problems caused by mining and abstraction activities for industrial minerals, coal, ores as well as for oil and gas, water and energy
- Environmental impacts of exploration and recultivation
- Environmental impacts of hazardous facilities and activities
- Management of land use including socio-political aspects of decision-making
- Management of environmental data and information in data banks and information systems

Dissemination of knowledge on techniques, methods, approaches and experiences directly aims at improvement and remediation of the environment as habitat for life on earth.

In pursuit of these topics the geo-scientific disciplines are invited to contribute their knowledge and experience. Major disciplines include: hydrogeology, hydrochemistry, geochemistry, geophysics, engineering geology, soil science and geomicrobiology.

2. History

Environmental Geology is the continuation of Environmental Geology and Water Science, merged in 1993.

3. Electronic Submission of manuscripts

Authors should submit their articles to Environmental Geology online to facilitate even quicker and more efficient processing. Electronic submission substantially reduces the editorial processing and reviewing time and shortens overall publication time.

Please log directly onto the link below and upload your manuscript following the instructions given on screen:
https://mc.manuscriptcentral.com/eg

4. Copyright

Submission of a manuscript implies:
that the work described has not been published before (except in form of an abstract or as part of a published lecture, review or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all co-authors, if any, as well as – tacitly or explicitly – by the responsible authorities at the institution where the work was carried out.

The author warrants that his/her contribution is original and that he/she has full power to make this grant. The author signs for and accepts responsibility for releasing this material on behalf of any and all co-authors.

Transfer of copyright to Springer (respectively to owner if other than Springer) becomes effective if and when the article is accepted for publication. After submission of the Copyright Transfer Statement signed by the corresponding author, changes of authorship or in the order of the authors listed will not be accepted by Springer. The copyright covers the exclusive right (for U.S. government employees: to the extent transferable) to reproduce and distribute the article, including reprints, translations, photographic reproductions, microform, electronic form (offline, online) or other reproductions of similar nature.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher (respectively the copyright owner if other than Springer). The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

An author may self-archive an author-created version of his/her article on his/her own website. He/she may also deposit this version on his/her institution’s and funder’s (funder’s designated) repository at the funder’s request or as a result of a legal obligation, including his/her final version, provided it is not made publicly available until after 12 months of official publication.

He/she may not use the publisher’s PDF version which is posted on www.springerlink.com for the purpose of self-archiving or deposit. Furthermore, the author may only post his/her version provided acknowledgement is given to the original source of publication and a link is inserted to the published article on Springer’s website. The link must be accompanied by the following text: “The original publication is available at www.springerlink.com”.

The author is requested to use the appropriate DOI for the article (go to the Linking Options in the article, then to OpenURL and use the link with the DOI). Articles disseminated via www.springerlink.com are indexed, abstracted and referenced by many abstracting and information
services, bibliographic networks, subscription agencies, library networks, and consortia.

While the advice and information in this journal is believed to be true and accurate at the date of its publication, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; Tel.: +1-978-7508400, Fax: +1-978-6468600, http://www.copyfight.com, stating the ISSN of the journal, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

The Canada Institute for Scientific and Technical Information (CISTI) provides a comprehensive, world-wide document delivery service for all Springer journals. For more information, or to place an order for a copyright-cleared Springer document, please contact Client Assistant, Document Delivery, CISTI, Ottawa K1A 0S2, Canada (Tel.: +1-613-9939251; Fax: +1-613-9528243; e-mail: cisti.docdel@nrc.ca).

5. Subscription information

ISSN print edition 0943-0105
ISSN electronic edition 1432-0495

Subscription rates

For information on subscription rates please contact: Springer Customer Service Center GmbH

The Americas (North, South, Central America and the Caribbean): journals-ny@springer.com

Outside the Americas:
subscriptions@springer.com

Orders and inquiries

The Americas (North, South, Central America and the Caribbean):
Springer Journal Fulfillment
P.O. Box 2485, Secaucus, NJ 07096-2485, USA
Tel.: 800-SPRINGER (777-4643)
Tel.: +1-201-348-4033 (outside US and Canada)
Fax: +1-201-348-4505
e-mail: journals-ny@springer.com

Outside the Americas
via a bookseller or
Springer Customer Service Center GmbH
Haberstrasse 7, 69126 Heidelberg, Germany
Tel.: +49-6221-345-4304
Fax: +49-6221-345-4229
e-mail: subscriptions@springer.com

Business hours: Monday to Friday 8 a.m. to 9 p.m. local time and on German public holidays

Cancellations must be received by September 30 to take effect at the end of the same year.

Changes of address: Allow six weeks for all changes to become effective. All communications should include both old and new addresses (with postal codes) and should be accompanied by a mailing label from a recent issue.

According to § 4 Sect. 3 of the German Postal Services Data Protection Regulations, if a subscriber's address changes, the German Federal Post Office can inform the publisher of the new address even if the subscriber has not submitted a formal application for mail to be forwarded. Subscribers not in agreement with this procedure may send a written complaint to Springer Customer Service Center GmbH within 14 days of publication of this issue.

Back volumes: Prices are available on request.

Microform editions are available from: ProQuest. Further information available at: http://il.proquest.com/umi/
Editorial board

Robert C. Abbott
RAMS Environmental Inc., Ormond Beach, FL, USA

Paolo Bone
Department of Earth Sciences
University, "La Sapienza", Rome, Italy

Sean T. Brennan
US Geological Survey, Energy Resources Team
Reston, VA, USA

Emilie Castelino
Technical University of Catalonia
Barcelona, Spain

Andreas Dahmke
University of Kiel, Kiel, Germany

Yuan Daoxian
Institute of Karst Geography
Guilin, Guangxi, The People's Republic of China

Jan Dawidowicz
Institute of Geology PAN, Warsaw, Poland

David Drew
Department of Geography, Trinity College
Dublin, Ireland

Dayle Easley
University of New Orleans
New Orleans, LA, USA

Curt Elmore
University of Missouri - Rolla
Rolla, Missouri, USA

Lee G. Gerhard
University of Kansas, Lawrence, KS, USA

Roberto Gionfantini
Istituto di Geoscienze e Geofisiche, Pisa, Italy

Gabriele Grassegger
University of Stuttgart
Stuttgart, Germany

John Guza
University of Birmingham
Birmingham, England

Lars Hakanson
Uppsala University, Uppsala, Sweden

Hussein Idris
Consultant, P.E. LaMereaux & Associates, Inc., Cairo, Egypt

Uri Kafri
Geological Survey of Israel, Jerusalem, Israel

David M. Kargbo
Temple University, Philadelphia, PA, USA

Bernd Löttermoser
James Cook University
Townsville, Queensland, Australia

Ludwig Luckner
Dresdner Grundwasserforschungszentrum
Dresden, Germany

Gwenda Lyn Macphee
University of Kansas, Lawrence, KS, USA

Paul Marinos
National Technical University of Athens
Athens, Greece

Jörg Martschallat
TU Bergakademie Freiberg
Freiberg, Germany

Bashir A. Memen
P.E. LaMereaux & Associates, Inc.
Tuscaloosa, AL, USA

James B. McClelland
University of Alabama at Birmingham
Birmingham, AL, USA

Petr Milanovic
Energy Project, Beograd, Yugoslavia

John E. Moore
Hydrogeological Consultant, Denver, CO, USA

Asaf Peledger
Freie Universität Berlin, Berlin, Germany

Wolfango Plastino
University of Roma Tre, Roma, Italy

Ladislau Rybach
ETH Zürich, Zürich, Switzerland

Christoph Schüth
Technische Universität of Darmstadt
Darmstadt, Germany

Philippe Sentenac
University of Strathclyde
Glasgow, Scotland, UK

Siegfried Siegesmund
University of Göttingen
Göttingen, Germany

Agemar Siehl
University of Bonn, Bonn, Germany

S. Fred Singer
Science and Environmental Policy Project
Arlington, VA, USA

Francesco Spada
University of Rome "La Sapienza"
Rome, Italy

David Stephenson
Center for the Geosciences
Jackson, WY, USA

Berry H. Tew
Geological Survey of Alabama, Tuscaloosa, AL, USA

Mary Wallace Pitts
Tuscaloosa, AL, USA

Hubert Wiggering
ZALF
Müncheberg, Germany

Thomas Wink
Leibniz Institute for Applied Geosciences
Hannover, Germany

Isik Yilmaz
Cumhuriyet University
Sivas, Turkey

Igor S. Zekeer
Water Problems Institute, Moscow, Russia

Wanfang Zhou
P.E. LaMereaux & Associates, Inc.
Oak Ridge, TN, USA
Forward to the special issue—International Conference on Environment: Survival and Sustainability (ESS 2007)

Hüseyin Gökçekuş · Umut Türker · Münir Öztürk

Published online: 7 November 2008
© Springer-Verlag 2008

Environment is a subject that must be brought to the top of international agendas if the threats to sustainability and survival are to be countered. Economic development cannot eliminate poverty without conserving natural resources and maintaining ecosystem services, nor can productive activity ignore the significant effects of resource extraction and waste generation. Therefore, environment must be the central focus of both international and national programs at all levels.

The International Conference on the Environment: Survival and Sustainability (ESS2007), organized by the Near East University between 19 and 24 February 2007 was held in Lefkosa, Turkish Republic of Northern Cyprus. The conference aimed to contribute to the worldwide debate and tried to create a multi-disciplinary discussion forum where experts from various disciplines were able to discuss environmental issues in 21 different fields. The Conference brought together 2,052 participants from 108 countries and 1,463 papers including plenary talks, orally presented papers and posters. Posters were of exceptional quality and left participants were very impressed. The papers dealt with various kinds of environmental threats and proposed solutions at all scales.

This special issue of the Environmental Geology contains selected papers by researches representing different countries and disciplines. The readers will notice the wide range of topics displayed by the articles included. They cover a variety of topics displaying different environmental problems and their solutions on the base of survival and sustainability of the environment. The energy issues, the water quality concerns, the solid waste management, earthquake assessment and mine wastes are some of the topics dealt with in this special issue. All the papers contain ideas and results relating to the various problems in the preservation and management of environment, which are an important part of the world ecosystem.

As a guest editor, I would like to express my gratitude to the Editorial Board of the Environmental Geology for including some selected papers of the ESS2007 conference in this issue. I hope that the articles will provide the readers with a general idea regarding the content of the conference.

Prof. Dr. Hüseyin Gökçekuş
President of the Conference and Organizing Committee
Vice Rector of the Near East University
Lefkosa-TRNC

H. Gökçekuş (✉) · U. Türker
Near East University, Nicosia, North Cyprus
e-mail: ess2007@neu.edu.tr

U. Türker
e-mail: uturker@neu.edu.tr

M. Öztürk
Ege University, Izmir, Turkey
e-mail: mantirozturk@gmail.com
Environmental Geology

Volume 57 · Number 2 · March 2009

Special Issue:
Environment: Survival and Sustainability (2007)
(pp. 247–348)

SPECIAL ISSUES
Forward to the special issue—International Conference on Environment: Survival and Sustainability (ESS 2007)
H. Gökçeküş · U. Türker · M. Oztürk · 247

Ancient eco-technology of aqueduct engineering a sustainable water supply in the Mediterranean Island of Cyprus
T.A. Andrew · H. Gökçeküş · 249

The shape parameter and its modification for defining coastal profiles
U. Türker · M.S. Kandali · 259

Rehabilitation of asbestos mining waste: a Rehabilitation Priority Index (RPI) for South Africa
L. van Rensburg · S. Claassens · B. Reußenkötter · P.J. Lassen van Rensburg · 267

Multi-disciplinary modeling, in stratigraphy and groundwater stratigraphy of the Jordan River basin
T. Anker · E. Rosenthal · H. Shulman · A. Flexer · 275

Nondestructive test to track pollutant transport into landfill liners
A. Bezzar · F. Glumari · 283

Efficiency of compost in the removal of heavy metals from the industrial wastewater
G. Kocasoy · Z. Güvenç · 297

Landscape planning and management strategies for the Zir Valley, near Ankara, Turkey
S. Şahin · G. Eskinoglu · 297

Earthquake disaster risk assessment and evaluation of Turkey
K.A. Kosemaz · 307

Global warming threat on water resources and environmental review
Z. Sen · 321

A new technology for the measurement of the sea level and the sea state
C.J. Blais · 331

The bubbles of the boiling pot? An ecosystemic approach to culture, environment and quality of life
A.F. Pilon · 337

ERRATUM
The bubbles of the boiling pot? An ecosystemic approach to culture, environment and quality of life
A.F. Pilon · 347

ORIGINAL ARTICLES
An extension to the DRASTIC model to assess groundwater vulnerability to pollution: application to the Haouz aquifer of Marrakech (Morocco)
M. Sinan · M. Razack · 349

(Continuation on page 41)